

Duke Energy's Coal Ash Disposal Plans for Lee County

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Presentation Overview

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2. **Coal Ash Management Act of 2014 (Senate Bill 729)**
3. **Duke's Plan and Partners**
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How did we get here?

Feb. 2, 2014

An estimated 39,000 tons of coal ash spill into the Dan River in Eden, NC from the retired coal fired plant at Duke Energy's Dan River Site



Sept. 20, 2014

The Coal Ash Management Act of 2014 (Senate Bill 729) becomes law w/o the Governor's signature—requiring closure of high priority sites by 2019



Nov. 12, 2014

Representatives from Duke Energy, Charah, and Moore and Van Allen notify Lee County officials of plans to store 8 million tons of coal ash in Lee County. They submit excavation and disposal plans to DENR the following day.



Dec. 19, 2014

EPA Releases Coal Ash Rule, does not classify it as hazardous waste



Jan. 5, 2015

Lee County BOCC Pass Resolution Opposing Coal Ash Storage in Lee County

Coal Ash Management Act of 2014

Senate Bill 729

Coal Ash Management Act of 2014 (SB 729)

- Requires DENR to classify coal ash impoundments (ex: coal ash pond) as high risk, intermediate risk, or low risk and ensure closure of impoundments based on the following schedule
 - High Priority impoundments close no later than Dec. 31, 2019
 - Closure Plans due by Dec. 31, 2016
 - Intermediate risk impoundments close no later than Dec. 31, 2024
 - Closure Plans Due Dec. 31, 2017
 - Low risk impoundments close no later than Dec. 31, 2029
 - Closure Plans Due Dec. 31, 2018

Coal Ash Management Act of 2014 (SB 729)

- Coal ash removed from wet storage ponds and not approved in reuse methods is now considered “solid waste”, opening the door for the disposal of coal ash in landfills.
 - Ruling from EPA that coal ash is not hazardous ensured that coal ash can be disposed of in landfills
- Transferred all rule-making authority for solid and hazardous waste from the Commission on Public Health to the Environmental Management Commission

Coal Ash Management Act of 2014 (SB 729)

- Invalidates local ordinances that prohibit or have the effect of regulating the management of coal combustion residuals and coal combustion products.
 - Local governments cannot place any restriction or condition not placed by this legislation upon management of coal combustion residuals and coal combustion products within any county, city, or other political subdivision.

Coal Ash Management Act of 2014 (SB 729)

- Established nine member Coal Ash Management Commission with responsibility to:
 - Review and approve the prioritization classification of impoundments
 - Review and approve closure plans for impoundments
 - Review and make recommendations on the provisions of this legislation and other statutes and rules related to the management of CCR.
 - undertake any additional studies as requested by the General Assembly.
- Requires expedited review by DENR of permits necessary to conduct activities required by the legislation.

Coal Ash Management Act of 2014 (SB 729)

- Sets out requirements for use of coal ash as structural fill. Any use of coal ash as fill utilizing more than 80,000 tons on a site is required to have:
 - Liner systems
 - Leachate collection systems
 - Groundwater monitoring systems
 - Financial assurance
- Sets out requirements for “cap in place” closure of coal ash impoundments

Coal Ash Management Act of 2014 (SB 729)

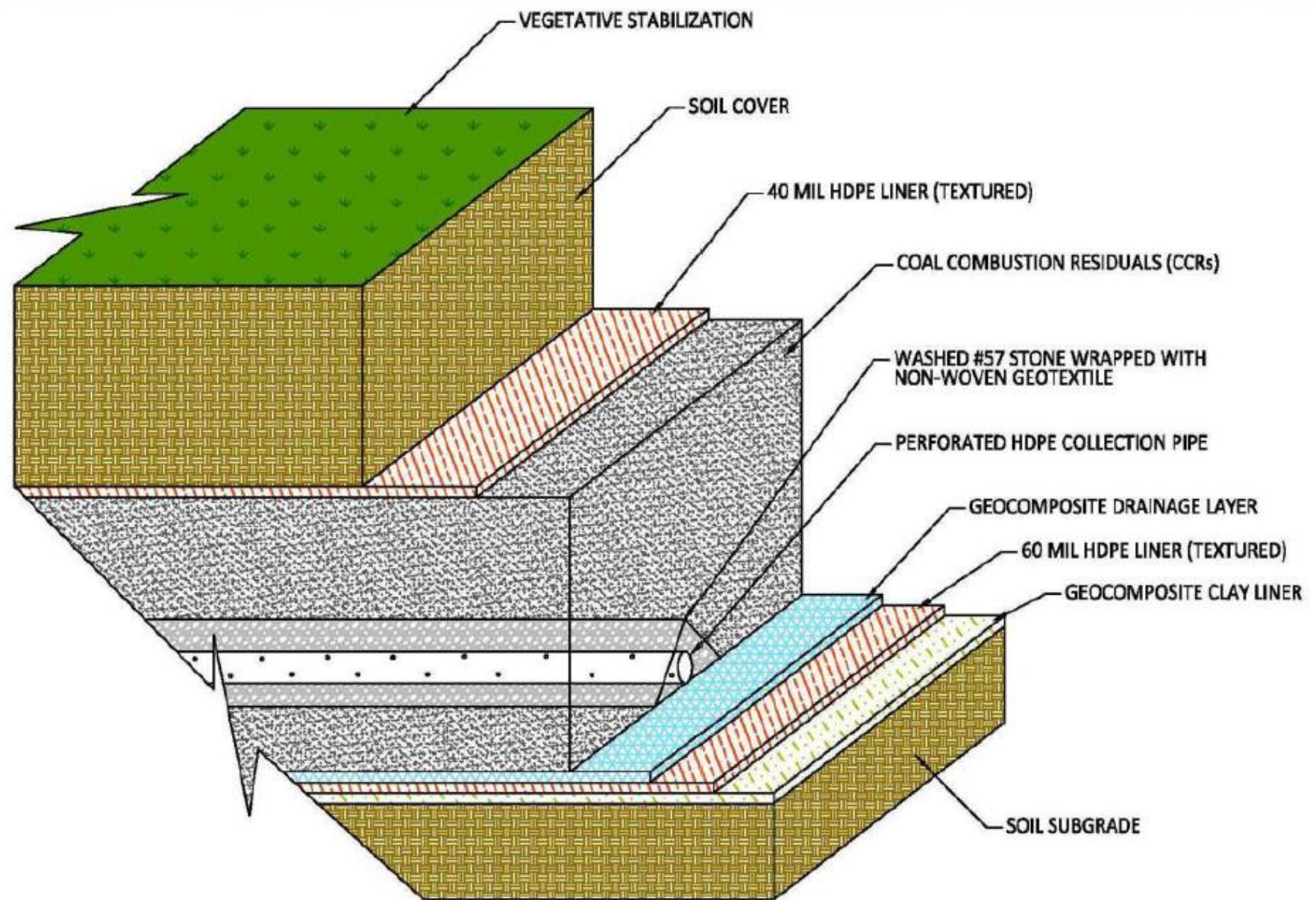
- Legislation Defines Structural Fill as:

“an engineered fill with a projected beneficial end use constructed using coal combustion products that are properly placed and compacted. For purposes of this Part, the term includes fill used to *reclaim open pit mines* and for embankments, greenscapes, foundations, construction foundations, and for bases or sub-bases under a structure or a footprint of a paved road, parking lot, sidewalk, walkway, or similar structure.”

Duke's Excavation and Disposal Plans

Duke's Excavation and Disposal Plans

- In response to the coal ash legislation, Duke contracted with Charah, Inc., a coal ash management company based in Louisville, KY, to carry out their plans for excavation and disposal of ash from the Riverbend (Mount Holly, NC) and Sutton (Wilmington, NC) plants.
- Duke and Charah's project is classified as a structural fill under the legislation, as part of an open pit mine reclamation at the Colon Mine
- Charah's plan is to transport approximately 8 million tons of coal ash from these sites to the Colon mine via rail



ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

A photograph of a large dam with a dark, textured face. The dam is made of vertical panels. In the foreground, there is a wide, shallow reservoir with a dark, rippled surface. The water reflects the sky and the dam. On the left side of the reservoir, there is a small, rocky island. The sky is overcast and grey. The overall scene is industrial and somewhat somber.

Charah's Structural Fill Project at the Asheville Airport



Charah's Structural Fill Project at the Asheville Airport

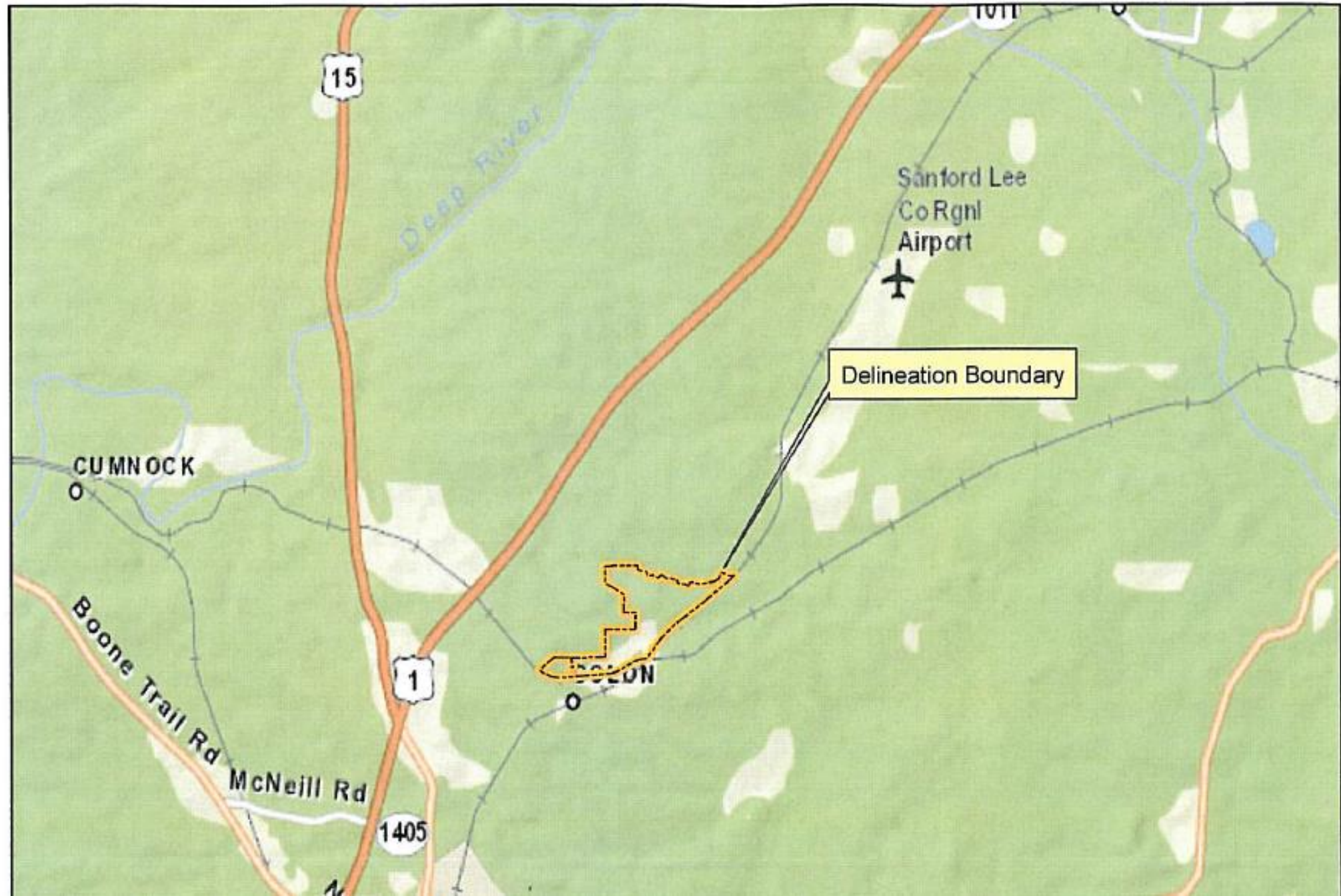


Base liner installation and subgrade preparation at Airport

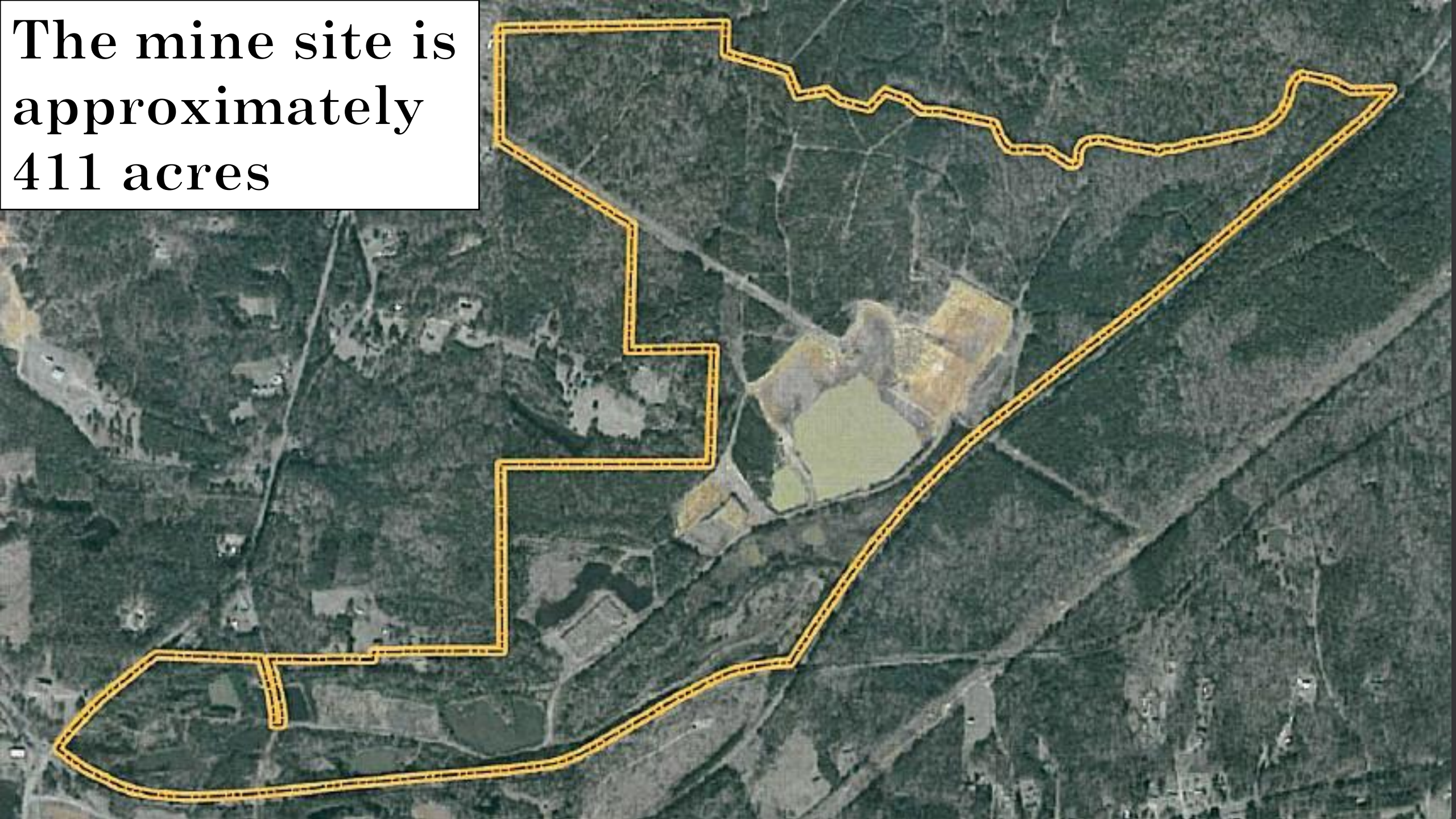


Colon Mine Site

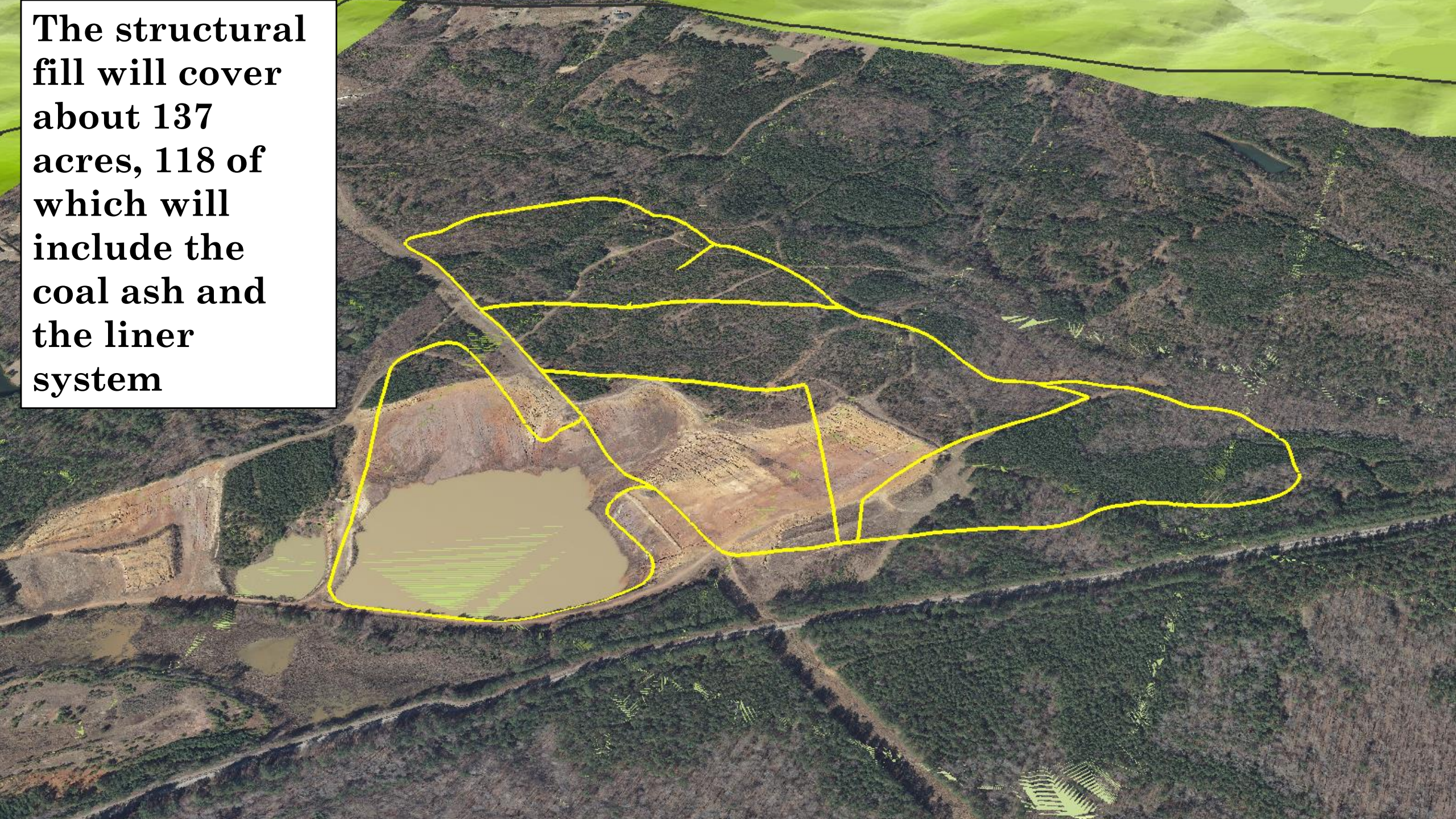
Colon Mine (+/-408 AC)

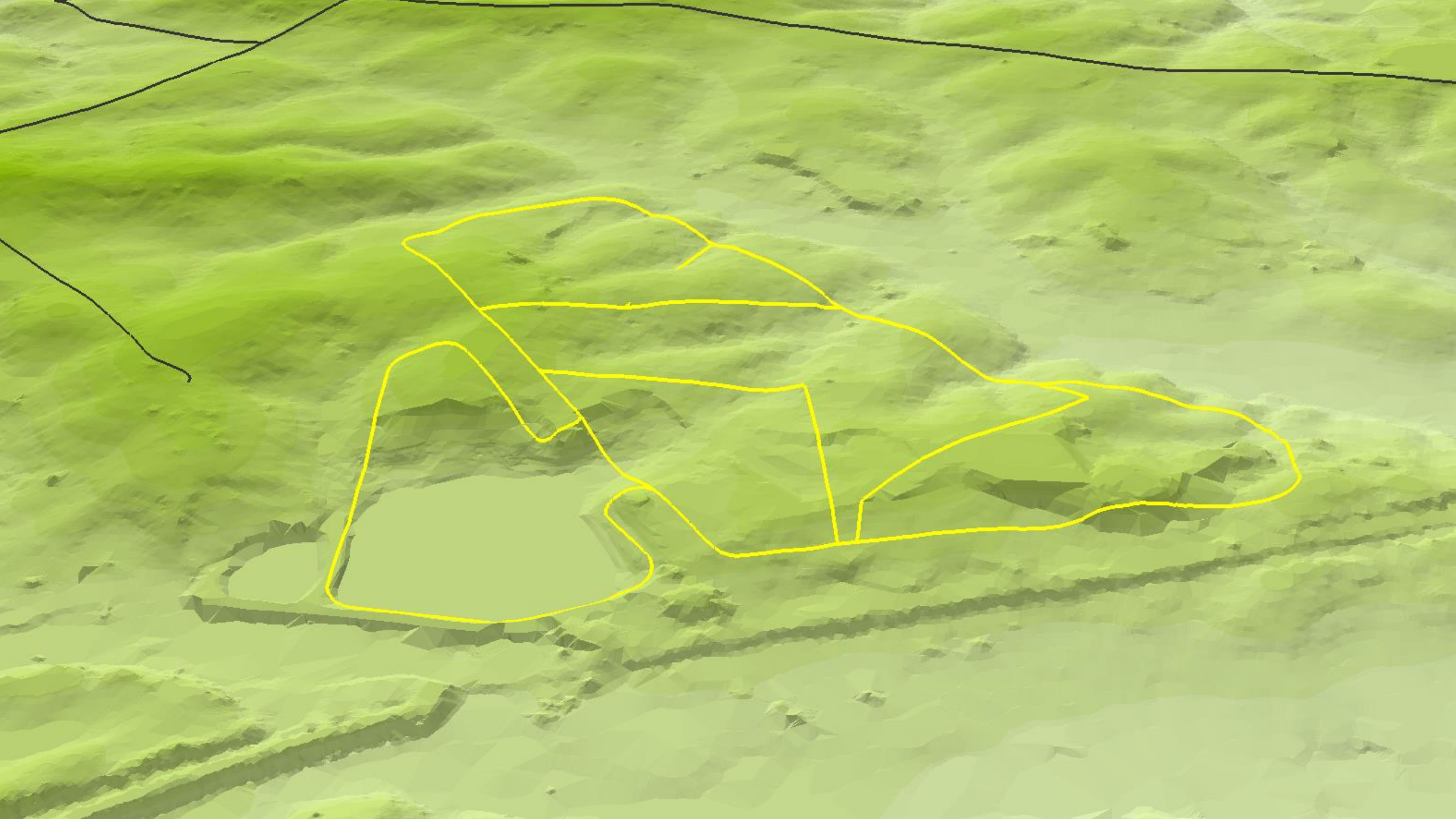


The mine site is
approximately
411 acres

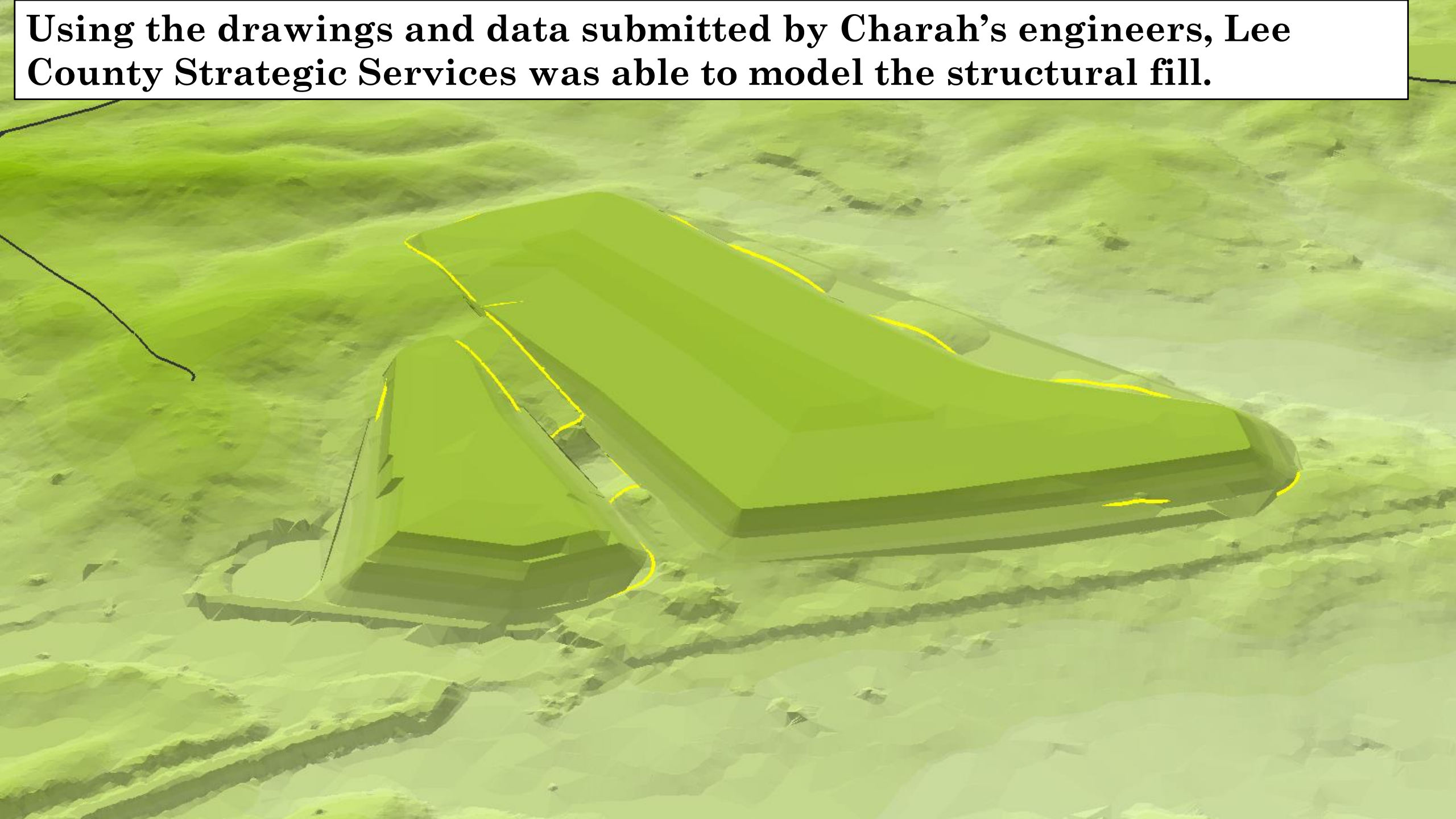


The structural fill will cover about 137 acres, 118 of which will include the coal ash and the liner system

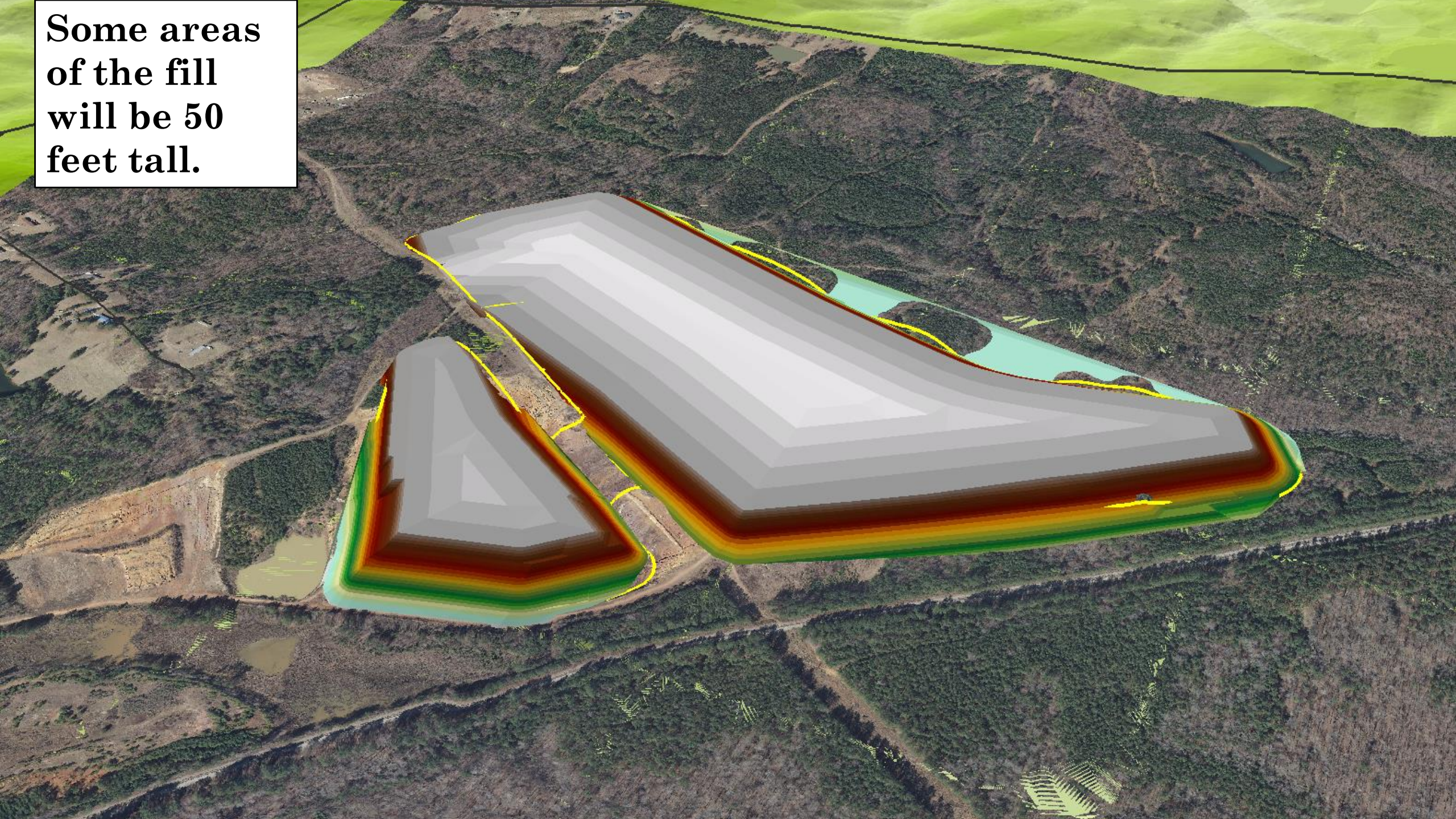




Using the drawings and data submitted by Charah's engineers, Lee County Strategic Services was able to model the structural fill.



Some areas
of the fill
will be 50
feet tall.



Charah Colon Mine Reclamation Timeline

Estimated Daily Ash Placement =	6,000	tons per day	
Operational days =	260	days per year	
Estimated Annual Ash Placement =	1,560,000	tons per year or	1,248,000 cys per year
Estimated Ash Density =	1.25	tons per cy	
Estimated Start of Filling =	Aug-15		

	Footprint (Ac)	Ash Volume (cy)*	Estimated Time for Ash Placement (yr)	Estimated Start of Closure Date	Estimated Closure Completion Date**
Phase 1	38.1	2,250,000	1.80	May-17	Nov-18
Phase 2	51.2	3,363,800	2.70	Jan-20	Jul-21
Phase 3	29.4	1,636,000	1.31	May-21	Nov-22

*Ash volume assumes vertical boundaries between phases

**Assumes 18 months to close from date of last ash placement